

Work Order ID 85539

June-11-12 9:53:42 AM

Ship 28/06
held

85539

Page 1

Item ID: D119-646-243

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: ML5

Date: 12/06/11

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3905 B

D3905-045,-13 B

IIN-D119-646 B

100 0.00

100

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D119-646-243
CHG 001

110 0.00

110

Skidtubes

Memo

0.00

Skidtubes

1- Inspect Mat'l D2500-1-190 for damage

2- Ensure squareness of ends

on 12/06/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 85539

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N900040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Float Skidtube w/ Training Wearplates

Stop

NS2

Start Date: 08/06/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject -
Number

Insp.
Stamp

120

Chemical Conversion Coat per QSI005 4.1

0.00

120

HandFinish

Memo

0.00

Hand Finishing

1 126.12

130

QC3- Inspect Part Finish

0.00

130

QC

Memo

0.00

Quality Control

① 12/06/13

150

0.00

150

Skidtubes

Memo

0.00

Skidtubes

1- Install drill jig DT9480 drill all x-bolt spacer holes using 3/16 drill

2- Scribe batch # inside aft end of tube

12/06/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng/ Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

155

0.00

155

CNC Bend 1

CNC Delta 100 Bender

Memo

0.00

1- Bend AFT end of tube using CNC Bender 1 and bend prog. D3905 AFT as per dwg D3905. Must use bending Aid DT9538, located 23.25" from Aft end.

2- Esure bending Aid DT9538 is positioned correctly, that the bender set up in on full wide and that the indexing ridge is covered with graphite grease.

165

QC5- Inspect part completeness to step on W/O

0.00

165

QC

Quality Control

Memo

0.00

DC 12/06/13

ND 12-6-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Required Date: 22/06/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start ***NR1***

QC: Date: SPC (Y/N): Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

180

0.00

180

Skidtubes

0.00

Skidtubes

Memo

1- Veriffy dimation of bend as per dwg D3905

2- Buff out marks left from bending.

3- Drill Aft Float bag holes using DT9493 as per dwg D3905 detail G and section F-F, open to finished size

4- Drill Aft wearplate and wearpad holes using DT9546 and DT9545 as per dwg D3905 detail G open to finished size

5- Open x-bolt spacer holes to finished size as per dwg (sections D-D and E-E)
DO NOT OPEN FWD SADDLE HOLES

6- Deburr, blow out chips from inside of tube

7-Bond web in place as per Dwg D3905 & QSI 015.

A/RSikaflex-291 121909

Sikaflex expire date: 13-4-12

Start: 12/06/15

Time: 9:15

Finish: 12/06/15

Time: 11:50

***** (Adhere for 12 hours) *****

De 12/06/13

- De 12/06/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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Required Date: 22/06/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

190	QC5- Inspect part completeness to step on W/O	0.00							
-----	---	------	--	--	--	--	--	--	--

190

QC	Memo	0.00							
----	------	------	--	--	--	--	--	--	--

Quality Control

200		0.00							
-----	--	------	--	--	--	--	--	--	--

200

CNC Bend 1

CNC Delta 100 Bender

Memo

1- Bend Fwd end of tube using bender 1 and bend prog. D3905 Fwd.Use bending aid DT9544 ensure proper positioning

2- Cut Fwd end of tube as per dwg.

VERIFY MEASUREMENT BEFORE CUTTING

12/06/19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Start Date: 08/06/2012 Start Qty: 1.00

1

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Required Date: 22/06/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210

0.00

210

Skidtubes

Skidtubes

Memo

0.00

1- Buff out marks left from bending

2- Drill Fwd cap holes using DT8215. Open Fwd and Aft cap holes to 0.208"

3- Open Fwd saddle holes to finished size as per dwg

4- Drill Fwd x-bolt hole and open to finished size. (Holes must be laid out manually).

5- Drill towing hole and open to finished size. (Holes must be laid out manually)

6- ~~Open Aft float holes 0.391" as per dwg D3905 detail G and section F-F~~

7- Deburr, blow out chips from inside of tube.

1 0 BE 2/06/19

220

QC5- Inspect part completeness to step on W/O

0.00

220

QC

Quality Control

Memo

0.00

12-6-19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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N900040100Setup Start ***NS1***

Revision ID:

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Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____ Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursTool ID Tool # Plan
Code Accept Reject Reject Insp.
Qty Qty Number Stamp

224

0.00

224

Skidtubes.

Skidtubes

Memo

1- Countersink x-bolt holes as per dwg

2- Remove alodine prepare for welding

3- Insert x-bolt spacers

4- Weld x-bolt spacer as per dwg

A/R Alum rod Batch: 17120164

5- Grind welds flush as per dwg

6- Counter bore x-bolt holes as per dwg

7- Deburr

0.00

8E12/06/20

7E12/06/21

225

QC5- Inspect part completeness to step on W/O

0.00

225

QC

Quality Control

Memo

0.00

120821

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 85539

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Item ID: D119-646-243

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N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

226 QC10- Inspect visual per QSI004- ground welds 0.00

226

QC Memo 0.00

Quality Control

227 Pressure Wash per QSI005 4.3 0.00

227

HandFinish Memo 0.00

Hand Finishing

240 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum 0.00

240

Powdercoat Memo 0.00

Powder Coating

11h35

320°F

11h55

m 120222

PC 12-06-22

1 MG 12-6-22

1 2P 12/06/25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Work Order ID 85539

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Required Date: 22/06/2012 Req'd Qty: 1.00 ***1***

Reference:

Approvals: Process Plan: _____ Date: _____

QC: _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

245

QC3- Inspect Part Finish

245

QC

Memo

Quality Control

250

250

HandFinish

Memo

Hand Finishing

1-Install inserts as per Dwg D3905.

260

QC5- Inspect part completeness to step on W/O

260

QC

Memo

Quality Control

Accept

N900040100

Setup Start ***NS1***

Stop ***NS2***

Cust Item ID:

Customer:

Tooling:

Date: _____

SPC (Y/N):

Date: _____

Run Start ***NR1***

Stop ***NR2***

Set Up/
Run Hours

0.00

0.00

0.00

0.00

0.00

0.00

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp

1x - f - H - 11/06/12

1 - 8 - SP - 12/04/26

(H)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____

Tooling:

Date: _____

Run Start ***NR1***

QC: _____ Date: _____

SPC (Y/N):

Date: _____

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan Accept Reject Reject Insp.
Code Qty Qty Number Stamp

270

0.00

270

HandFinish

Memo

0.00

Hand Finishing

1-Install wearpads, gaskets and wearplates as per Dwg D3905. Put sikaflex in insert before installing bolts and washers
A/RSikaflex-240/-291 121409
Sikaflex expire date: 13/07

2- install plugs assembly as per dwg.

3 -Inspect for foreign objects as per QSI 024

4 -Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/RSikaflex-240/-291 121409
Sikaflex expire date: 13/07

1 28 12/06/29

280

QC5- Inspect part completeness to step on W/O

0.00

280

QC

Memo

0.00

Quality Control

8/21/09/29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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N900040100

Setup Start *NS1*

Stop *NS2*

Stop *NS2*

Start Date: 08/06/2012 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 22/06/2012 **Req'd Qty:** 1.00 *** 1 ***

Customer:

Reference:

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:** **Run** **Start** ***NR1***
QC: **Date:** **SPC (Y/N):** **Date:** **Stop** ***NR2***

[illegible]

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Start Date: 08/06/2012 Start Qty: 1.00 ***1***

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Run Start ***NR1***

QC: _____ Date: _____

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Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

300

QC21- Final Inspection - Work Order Release

0.00

300

QC

Memo

0.00

Quality Control

MLJ 12/06/29

MF

12-06-29

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Picklist Print

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Page 1

Work Order ID: 85539

85539

Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Fioat Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP RevA: New issue DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-190		Manufactured	No			110	Each	85.0000	1	1			
D2500-1-190													
Ext'n -1' Beam Tube 4"													

**

DC 12/06/12

Location

Loc Qty

Loc Code

HALL

85

74777

12

80061

73

D3885-3

Manufactured No

170

Each

10.0000

1

1

D3885-3

Standard Web

**

DC 12/06/15

Location

Loc Qty

Loc Code

LG

10

52425

10

D3903-1

Manufactured No

190

Each

70.0000

12

1

12

D3903-1

Spacer

**

DC 12/06/20

Location

Loc Qty

Loc Code

LG

40

74876

40

LG001

30

78790

30

12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Picklist Print

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Work Order ID: 85539

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Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3681-1

Manufactured No

190

Each

53.0000

8

8

D3681-1

Spacer

**

SE 12/06/20

Location

Loc Qty

Loc Code

LG

43

80361

1

84053

42

LG001

10

68958

2

69893

2

71845

2

74874

1

76004

1

77501

2

D3683-3

Purchased

No

250

Each

586.0000

12

12

D3683-3

Insert

**

12

(DP)

12/06/26

Location

Loc Qty

Loc Code

FP002

26

47805 ✓

26

ST060

560

47805

560

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-11-12 9:53:46 AM

Page 3

Work Order ID: 85539

85539

Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

250

Each

1,973.000

10

10

AI S4-1032-130

Insert

**

10

DP

12/06/26

Location

Loc Qty

Loc Code

ST280

205

119084

116

120671

89

ST281

44

120807

36

120837

8

ST282

1724

121269 ✓

1724

D2855-3

Manufactured

No

270

Each

22.0000

2

2

D2855-3

Cap

**

2

DP

12/06/26

Location

Loc Qty

Loc Code

FP002

22

52281

7

75080 ✓

15

D3672-1

Manufactured

No

270

Each

1,530.000

4

4

D3672-1

Phenolic Washer

**

4

DP

12/06/26

Location

Loc Qty

Loc Code

ST060

1530

72229

4

76277

20

80369 ✓

496

83608

500

85222

510

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-11-12 9:53:46 AM

Page 4

Work Order ID: 85539

85539

Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3846-1	Manufactured	No	270	Each	36.0000	1	1
D3846-1						**	1 (SP) 12/06/26
GASKET							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP002	36	
51827	4	
53735 ✓	32	

D3846-11	Manufactured	No	270	Each	13.0000	1	1
D3846-11						**	1 (SP) 12/06/26
GASKET							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP002	13	
51833 ✓	13	

D3847-1	Manufactured	No	270	Each	11.0000	1	1
D3847-1						**	1 (SP) 12/06/26
WEARPAD							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP002	11	
51823 ✓	11	

D3847-11	Manufactured	No	270	Each	15.0000	1	1
D3847-11						**	1 (SP) 12/06/26
WEARPAD							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP002	15	
51824 ✓	15	

D3849-047	Manufactured	No	270	Each	0.0000	1	1
D3849-047						**	1 (SP) 12/06/29
WEARPLATE							

85543 ✓

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 5

Work Order ID: 85539

85539

Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3849-045

Manufactured No

270

Each

0.0000

1

1

D3849-045

AFT WEARPLATE ASSY, FLOAT GEAR

D3904-1

Manufactured No

270

Each

177.0000

16

16

D3904-1

Washer

85542✓

**

1

(28)

12/06/27

Location

Loc Qty

Loc Code

ST068

177

51875✓

177

D3672-3

Manufactured No

270

Each

583.0000

12

12

D3672-3

Phenolic Washer

**

12

(28)

12/06/26

Location

Loc Qty

Loc Code

ST060

583

84361✓

583

AN3C5A

Purchased No

270

Each

1,274.000

14

14

AN3C5A

Bolt

**

14

(28)

12/06/26

Location

Loc Qty

Loc Code

FP001

7

115835

7

ST350

1267

116419

28

117343

13

117764

7

117872

2

119749

23

120423

28

121068

12

121255✓

500

121444✓

154

121708

500

13

June-11-12 9:53:46 AM

Shop Packet Print

Page 5

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-11-12 9:53:46 AM

Page 6

Work Order ID: 85539

85539

Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C46A Purchased No 270 Each 43.0000 4 4
AN3C46A ** 4 (2P) 12/06/26
 BOLT

Location Loc Qty Loc Code

ST355 43
 120447 ✓ 43

AN960C10L * NAS1149C0332 Purchased No 270 Each 21.0000 10 10
***AN960C10I *** ** 14 (2P) 12/06/26
 washer * * *

Location Loc Qty Loc Code

ST 21
 107534 21

AN960C416 * NAS1149C0463 Purchased No 270 Each 0.0000 12 12
AN960C416 ** 12 (2P) 12/06/26
 washer

MS21043-3 Purchased No 270 Each 1,439.000 8 8
MS21043-3 ** 8 (2P) 12/06/26
 Nut

Location Loc Qty Loc Code

FG 72
 103691 72
 ST301 1367
 118077 2
 118614 ✓ 51
 118686 30
 119758 20
 121255 270
 121708 ✓ 994

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-11-12 9:53:46 AM

Page 7

Work Order ID: 85539

85539

Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039C4-08

Purchased

No

270

Each

98.0000

12

12

MS27039C4-08

SCREW

**

12

2P

12/06/26

Location

Loc Qty

Loc Code

FP002

7

17831

7

ST293

91

114721 ✓

91

AN3C50A

Purchased

No

270

Each

78.0000

4

4

AN3C50A

Bolt

**

4

2P

12/06/26

Location

Loc Qty

Loc Code

ST355

78

112761

20

114442 ✓

33

120447

25

D3411-3

Manufactured

No

270

Each

58.0000

16

16

D3411-3

WASHER

**

16

2P

12/06/26

Location

Loc Qty

Loc Code

ST042

58

51635

17

55317 ✓

41

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

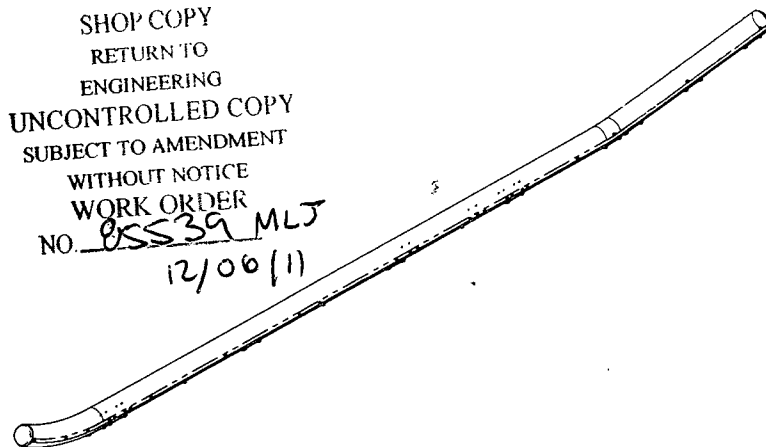
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 85539 MLT
12/00/11



D3905-041 FLOAT SKIDTUBE ASSY WITH WEARPAD (SHOWN)
D3905-043 FLOAT SKIDTUBE ASSY WITH WEARPLATE (SIMILAR)
D3905-045 FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE (SIMILAR)

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3885-3 FLOAT WEB
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3905-041 = 40.7 lbs
D3905-043 = 47.0 lbs
D3905-045 = 47.3 lbs
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 8.5 INCHES
ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP 0.020" DEEP IN THE BENT
PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT
PORTION OF THE TUBE.
- 10) INSERT D3885-3 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE
WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP
- 11) INSERT D3492-045 PLUG ASSY INTO Ø0.197 HOLES (BOTH SIDES OF TUBE)
- 12) USE DART DRILL TEMPLATE DT8932 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARPLATE INSERTS.
INSTALL AELS-1032-130 INTO D3905-11 ONLY. INSTALL AN3C5A BOLTS AND NAS1149C0332R WASHERS
WITH SIKAFLEX-241/-291.

ITEM	QTY -041	QTY -043	QTY -045	P/N	DESCRIPTION
1	X			D3905-041	FLOAT SKIDTUBE ASSY WITH WEARPAD
2		X		D3905-043	FLOAT SKIDTUBE ASSY WITH WEARPLATE
3			X	D3905-045	FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE
11	2	2	2	D2855-3	CAP
12	16	16		D3492-045	PLUG ASSY
13	4	4	4	D3672-1	PHENOLIC WASHER
14	8	8	8	D3681-1	SPACER
15	8	1	1	D3846-1	GASKET
16	1	1	1	D3846-11	GASKET
17	8	8	1	D3847-1	WEARPAD
18	1	1	1	D3847-11	WEARPAD
19		1		D3847-043	FWD WEARPLATE ASSY
20		1		D3847-045	CENTER WEARPLATE ASSY
21		1		D3847-049	AFT WEARPLATE ASSY
22			1	D3849-047	FWD WEARPLATE ASSY
23			1	D3849-045	AFT WEARPLATE ASSY
24	1	1	1	D3885-3	FLOAT WEB
25	1	1		D3905-11	FLOAT SKIDTUBE
26			1	D3905-13	FLOAT SKIDTUBE
27	12	12	12	D3903-1	SPACER
28			16	D3904-1	WASHER
29	12	12	12	D3672-3	WASHER
30	12	12	12	D3683-3	INSERT
31			16	D3411-3	WASHER
41	42	42	10	ALS4-1032-130	INSERT
42	46	46	14	AN3C5A	BOLT
43			4	AN3C46A	BOLT
44			4	AN3C50A	BOLT
45	46	46	10	NAS1149C0332R	WASHER (OR AN960C10L)
46	12	12	12	NAS1149C0463R	WASHER (OR AN960C416)
47			8	MS21043-3	NUT
48	12	12	12	MS27039C4-08	SCREW

RELEASED
09/07/15

B	REVISED PART LIST. ALS4-1032-130 WAS AELS-1032-130 (ZN A6-5, A6-6, C5-7, C3-7, A5-7); ADD DT8932 (ZN A6-1); D2855-3 WAS D2575 (ZN C8-2, C1-2, C8-3, C1-3, C8-4, C1-4); AN3C5A WAS AN3C4A (ZN C7-2, C1-2, C7-3, C1-3, C7-4, C1-4); D3849-047 WAS D3849-041 (ZN B3-4); ADD D3411-3 (ZN B3-4); ADD AN3C50A (ZN B3-4); Ø0.313 WAS Ø0.328 (B2-5, B2-6, C2-7, A6-7 & D7-6); REVISED NOTE 14 (ZN A6-7)	RF	09.06.30
A	NEW ISSUE	RF	09.03.30
REV	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO	REV. B
MFG. APPR.	RF	D3905	SHEET 1 OF 8
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	09.06.30	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COME OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

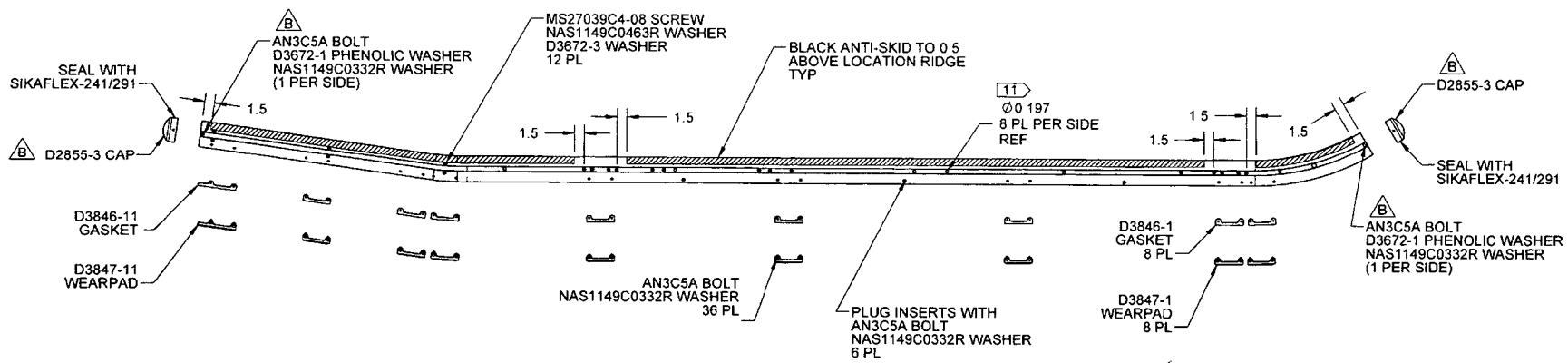
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____



NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3905-041 FLOAT SKIDTUBE ASSY WITH WEARPAD
(MAKE FROM D3905-11 SKIDTUBE)

RELEASED
10/07/15

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO	REV. B
MFG. APPR.		D3905	SHEET 2 OF 8
APPROVED		TITLE	SCALE
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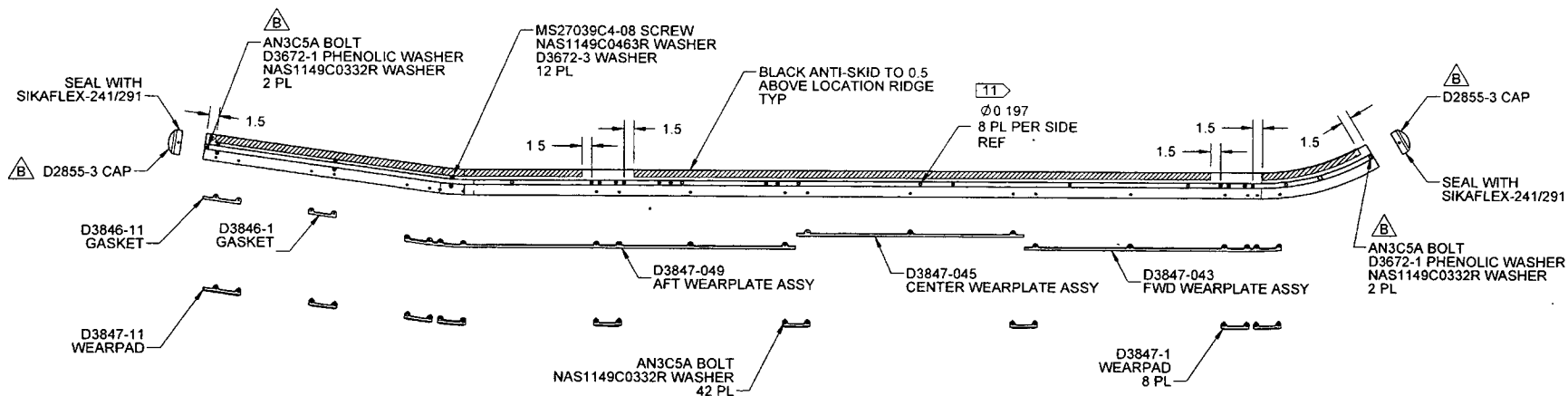
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3905-043 FLOAT SKIDTUBE ASSY WITH WEARPLATE
(MAKE FROM D3905-11 SKIDTUBE)

RELEASE
9/07/15

DESIGN	RF	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	RF		
CHECKED	FW	DRAWING NO. D3905	REV. B
MFG. APPR.	FW		SHEET 3 OF 8
APPROVED	FW	TITLE	SCALE
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

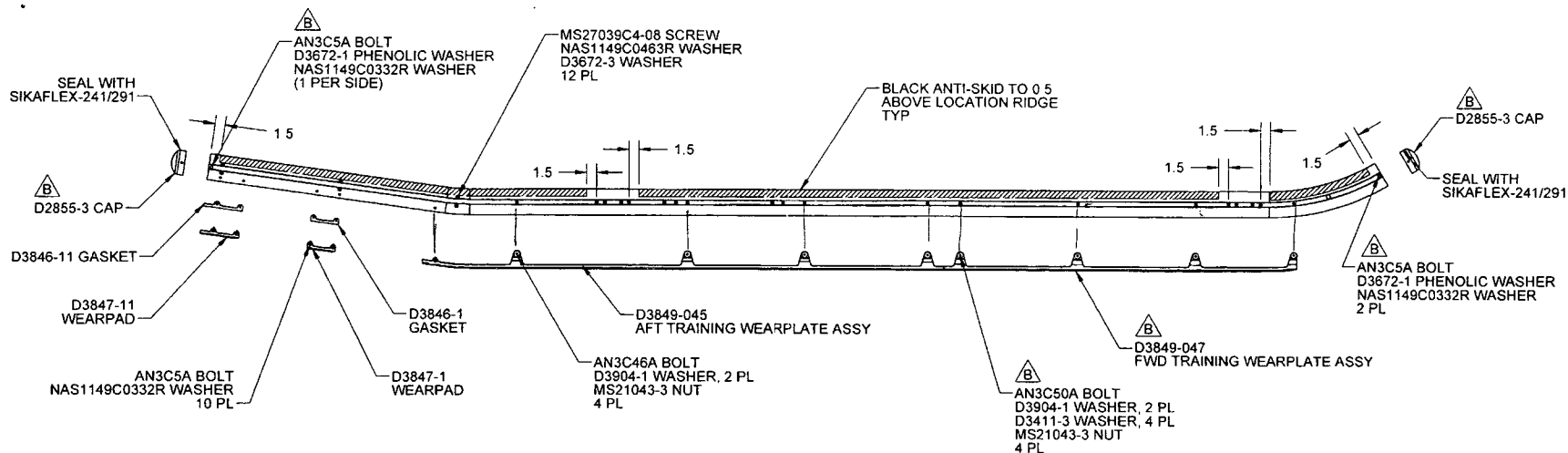
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			



NOTE: Date & initial all entries

25535



D3905-045 FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE
(MAKE FROM D3905-13 SKIDTUBE)

RELEASED
09/07/15 MB

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DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.		D3905	SHEET 4 OF 8
APPROVED		TITLE	SCALE
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DATE	09.06.30	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC.	
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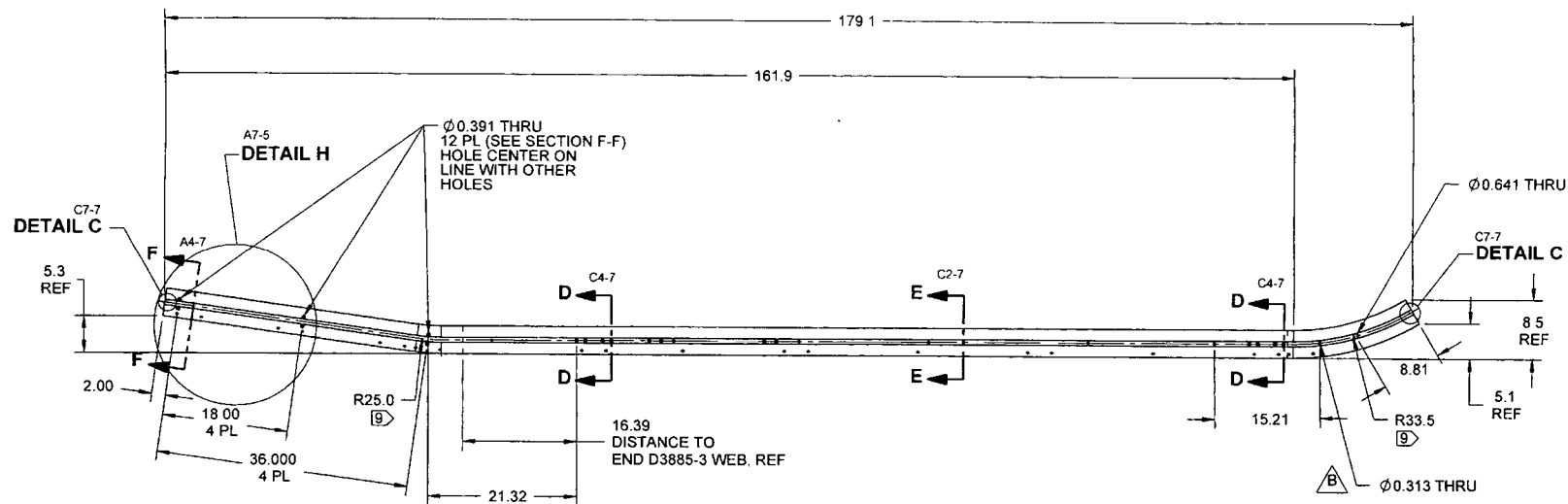
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

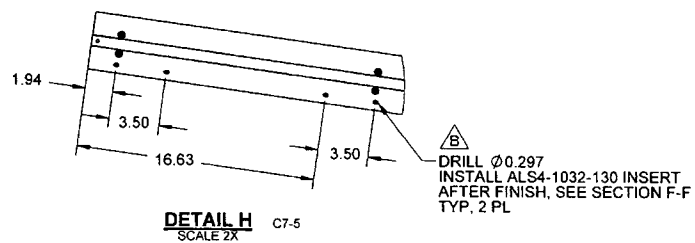
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3905-11 FLOAT SKIDTUBE
(MAKE FROM D3905-1 TUBE)



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09/07/15

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO. D3905	REV. B
MFG. APPR.	RF	TITLE	SHEET 5 OF 8
APPROVED	RF	A119 FLOAT SKIDTUBE ASSY	SCALE
DE APPR	RF		NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

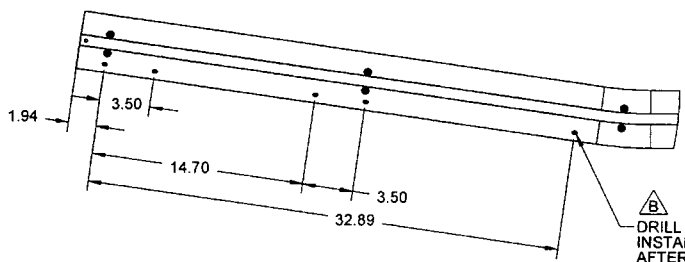
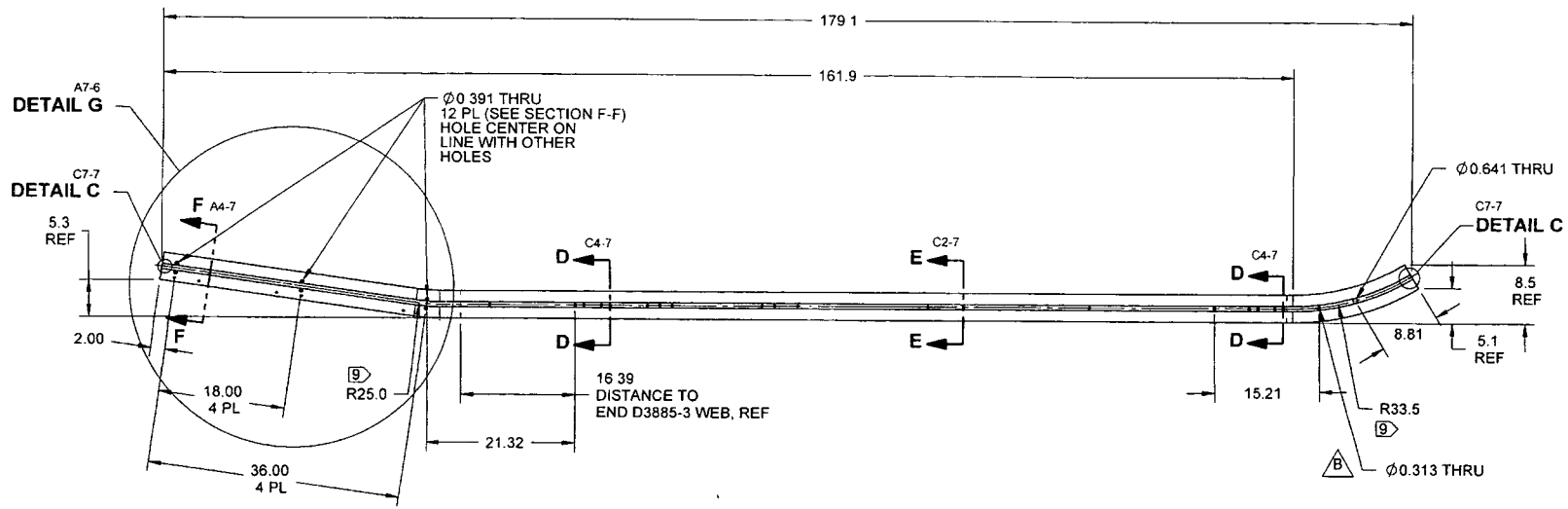
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

2539



DETAIL G
SCALE 2X

DRILL Ø0.297
INSTALL ALS4-1032-130 INSERT
AFTER FINISH, SEE SECTION F-F
TYP, 2 PL

D3905-13 FLOAT SKIDTUBE
(MAKE FROM D3905-1 TUBE)

RELEASED
09/07/15

DESIGN	RF	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	RF		
CHECKED	PH	DRAWING NO. D3905	REV. B
MFG. APPR.	PH	SHEET 6 OF 8	
APPROVED	MM	TITLE	SCALE
DE APPR.	MM	A119 FLOAT SKIDTUBE ASSY	
DATE	09.06.30	NTS	

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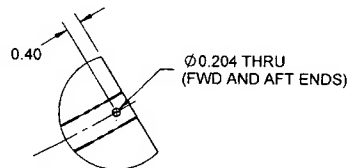
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

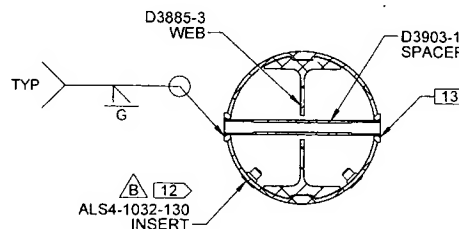
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DETAIL C
SCALE 4X

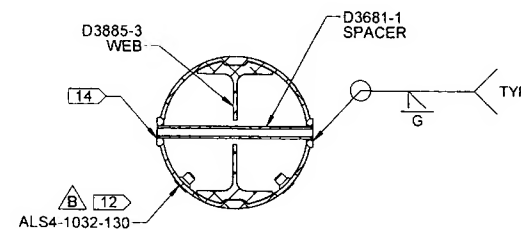
C1-5
C8-5
C8-6
C1-6



SECTION D-D
SCALE 4X

(FOR 12 x $\phi 0.375$ HOLES
PER SKIDTUBE)

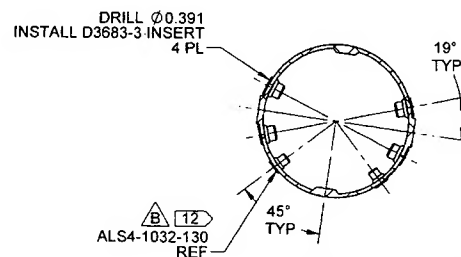
C5-5
C2-5
C5-6
C2-6



SECTION E-E
SCALE 4X

(FOR 8 x $\phi 0.313$ HOLES
PER SKIDTUBE)

C4-5
C4-6



SECTION F-F
SCALE 4X

C7-5
C7-5

NOTES:

- 13) AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR $\phi 0.375$ HOLES ONLY:
i) CHAMFER HOLES $\phi 0.475 \times 45^\circ$ (BOTH SIDES)
ii) INSERT D3903-1 SPACER
iii) WELD INTO PLACE AND GRIND FLUSH
iv) C-BORE TO 0.313×0.75 DEEP
v) DEBURR HOLES

- 14) AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR $\phi 0.313$ HOLES ONLY:
vi) CHAMFER HOLES $\phi 0.354 \times 45^\circ$ OR 0.050 DEEP $\times 45^\circ$ (BOTH SIDES)
vii) INSERT D3681-1 SPACER
viii) WELD INTO PLACE AND GRIND FLUSH
ix) DEBURR HOLES

RELEASED
09/07/15

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D3905	SHEET 7 OF 8
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	A119 FLOAT SKIDTUBE ASSY	NTS
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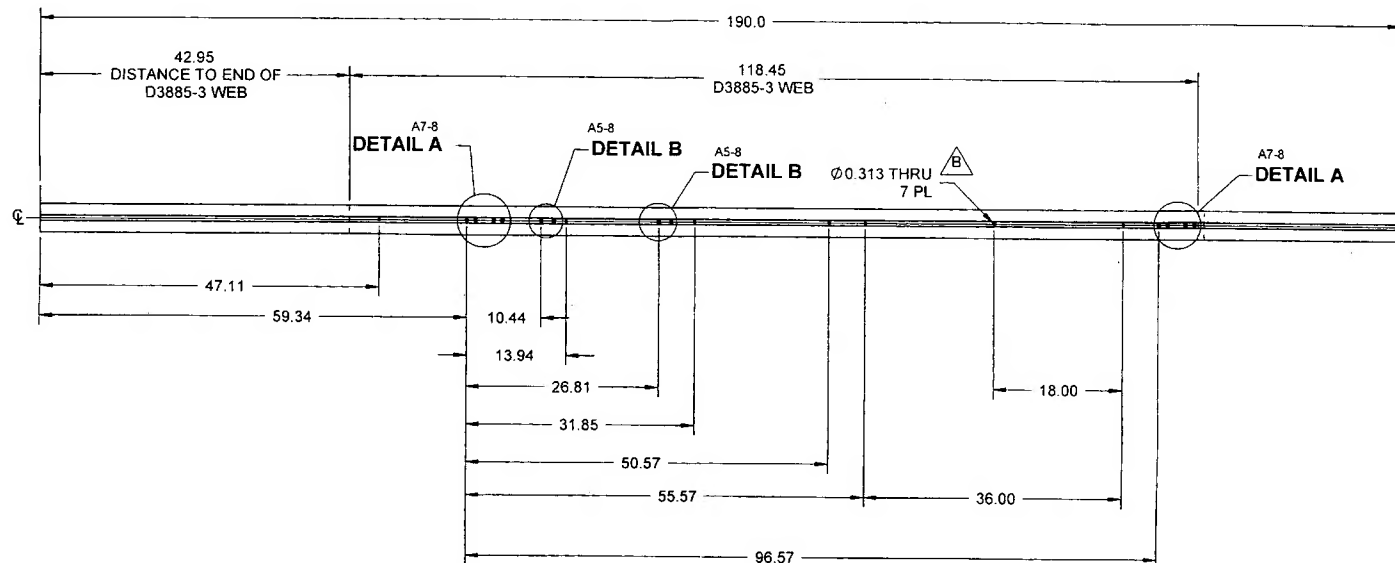
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

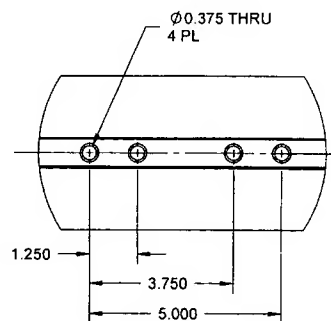
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

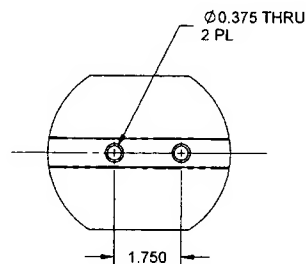
NOTE: Date & initial all entries



D3905-1 TUBE
(MAKE FROM D2500-1-190 EXTRUSION)



DETAIL A
SCALE 4X D6-8
D2-8



DETAIL B
SCALE 4X D5-8
D4-8

RELEASED
21/07/15

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.		D3905	SHEET 8 OF 8
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NOTE: Date & initial all entries